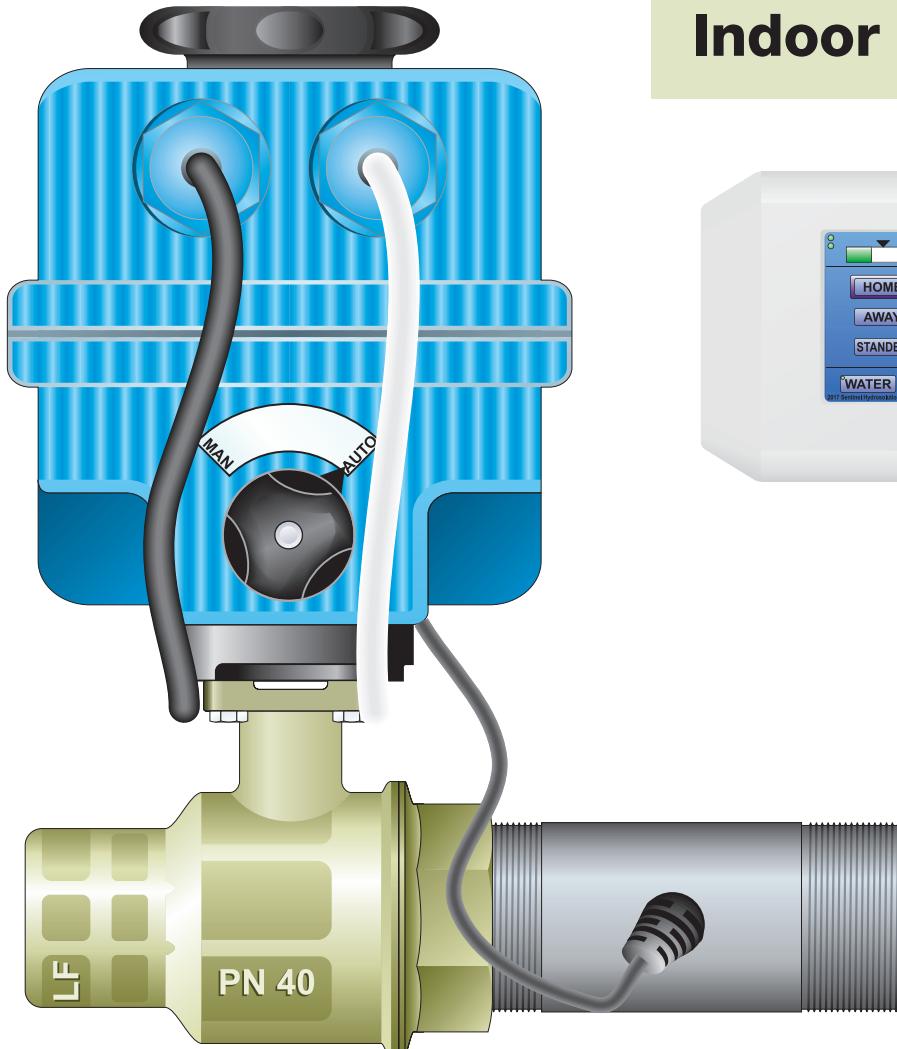


Installation Guide & Owner's Manual



Indoor installation only



CRITICAL NOTES for installing the Leak Defense System

are highlighted in shaded boxes throughout the document.

It is essential these critical notes are read prior to installation.

VERY IMPORTANT!

The Leak Defense System large valve/flowbody assemblies can weigh over 15 lbs. Bracing may be required if your plumbing system is unable to support this weight.



INSTALLER:

Please leave this guide with the homeowner when installation is complete.



Congratulations on installing the most advanced system available to protect Homeowners against catastrophic loss due to water damage.

The Leak Defense System monitors the flow of water into your home 24 hours a day, 7 days a week. Should a leak develop, the system will alarm, and, if the leak is not corrected, will automatically halt all water flow to the home before additional damage can occur.

System Overview

The system includes a motorized ball valve, extremely low flow sensors and a control panel with a touch screen display. If water flow to your home continuously exceeds your system settings for more than your predetermined time, the alarm will sound and the ball valve will close — shutting off water to your home and potentially preventing major water damage. So the principle of the system is continuous water flow over time. Everything in your house allows for water to start and stop. A leak is the one situation where the water does not stop. The Leak Defense System is looking for this.

System Features

- Constant monitoring of your water system (*24 hours per day, 7 days a week*)
- Leak detection with audio/visual alarm notifications
- Automatic water shut-off protection to minimize water damage
- State of the art wireless color touch screen control panel
- System retains all settings in memory, even if the electrical power is interrupted
- Simple menu driven programming
- Ability to turn water ON and OFF from the control panel

Serial Number: _____

Installation Date: _____

Company / Person who installed
the Leak Defense System: _____

Installer Phone Number: _____

Sentinel Hydrosolutions Leak Defense System

Help Line: 1.866.410.1134

(9:00am to 4:00pm Pacific Time)



INSTALLER –

After installation, review Leak Defense System operation with the owner

Using pages 21-23 of the Owner's Manual section as a guide:

- a. Explain the system and use the control panel to demonstrate the various Leak Defense System functions.
- b. Encourage the owner to physically interact with the control panel during your demonstration. This will promote a level of comfort and usability.
- c. ***Clearly explain the purpose of the Leak Defense System is to detect and protect from leaks and not to locate the source of leaks.***
- d. Explain the Leak Defense System will constantly monitor water flow every day.
- e. Explain the importance of using the AWAY mode
 1. Explain the difference between the HOME and AWAY mode settings
 2. Explain that not using the AWAY mode when the home is unoccupied limits protection to the HOME mode settings.

NOTE: Take the owner through an alarm scenario as part of the customer education and to test the alarm.

OWNERS –

There are helpful videos on our website with information that might be more up to date regarding the operation of your Leak Defense System. You can access them at www.leakdefensesystem.com



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Installation Guide

STEP 1:

Tools and supplies needed

- a. Pipe cutting, soldering equipment and supplies
- b. Tape measure
- c. Pipe marking pen
- d. #2 Phillips screw driver
- e. 1/4" twist drill bit and drill (diameter of no more than .160")
- f. 2 ea. - #6 drywall anchors and screws

STEP 2:

Pre-Installation Survey

There are six steps necessary to properly perform a pre-installation survey. These are:

1) Determine the best location for the Leak Defense System valve.

The valve must be located downstream of any fire sprinkler system and, ideally, should be located down-stream of all irrigation lines. The valve should be installed in an indoor location free from direct sun and moisture.

2) Determine if any of the following water using systems is downstream of the Leak Defense System valve:

a) Reverse Osmosis Water Purification System	d) Automatic Pool Fill System
b) Water Softener System	e) Outside hose bibs
c) Irrigation System	f) Any other appliance that may automatically use water

3) If any of the above is present down-stream of the Leak Defense System valve, please refer to the document, LDS-API, Alarm Panel Interface.

4) Determine where a non-switched 120 VAC outlet is in a dry location and determine how you will get the (2 conductor) power wire to the transformer at this location.

24 VAC from the transformer should not be run longer than 100 feet. If a longer power wire is needed, it is recommended that a new 120VAC outlet be installed closer to the Leak Defense System.

5) Determine where the customer would like the wireless control panel and confirm it is within 100' of where the valve is installed.

A standard 110 outlet is required to provide power to the wireless panel.

6) A battery backup or generator is recommended for locations that are prone to power outages.

STEP 3:

Determining the valve location for the Leak Defense System

The Leak Defense System valve must be installed on the main water line and downstream of the primary shut-off valve, pressure regulator, irrigation line and fire sprinkler line. (See Figure 1 on page 9.)

Typical location of the Leak Defense System valve installation will be in a garage, basement or crawl space. If the home is on a concrete slab, the valve can be installed in the garage or before water enters the home. In the latter case, the valve should be located at least 18" above grade. It must be protected from direct sun exposure, moisture and freezing conditions.

Other important considerations include:

- a. Install the valve in an accessible location allowing easy access for proper installation and maintenance.
- b. Some water utilities require the valve be a minimum of 18" downstream of the water utility meter.
- c. If possible, install the valve downstream of a manual shut-off valve to allow for easier maintenance.
- d. A bypass around the valve is not required but may be recommended.

IMPORTANT: The valve cannot be installed where it may be submerged in water or exposed to moisture or freezing conditions. An appropriate insulated or water proof box should be installed to protect the Leak Defense System.

Note: If there is a fire sprinkler and/or irrigation system that branches off the building supply downstream of the utility meter, the Leak Defense System valve must be installed on the building supply downstream of the fire sprinkler, and if possible, irrigation supply branch. In no instance may the Leak Defense System be installed in a way that it will interfere with the fire sprinkler system.

Note: The Leak Defense System sees water flowing, but does not differentiate between flow direction (flow in vs. out). As water main pressures fluctuate, there may be a slight flow out of the home/office which will be seen as flow. A backflow preventer valve (=SPRING check valve) may be considered to remedy this. This backflow will usually only be an intermittent or sporadic event, while a leak will have continuous water movement.

STEP 4:

Locate an electrical outlet for the valve

- a. Locate an available 120 VAC outlet close to the valve into which the transformer can be plugged. Make sure this outlet is not connected to an on/off switch or a GFI.
- b. The 120 VAC outlet should not be more than 100 feet from the valve. If a longer power wire is needed, it is recommended that a new 120 VAC outlet be installed closer to the valve.

Critical: The outlet must be located in a dry location.

STEP 5:

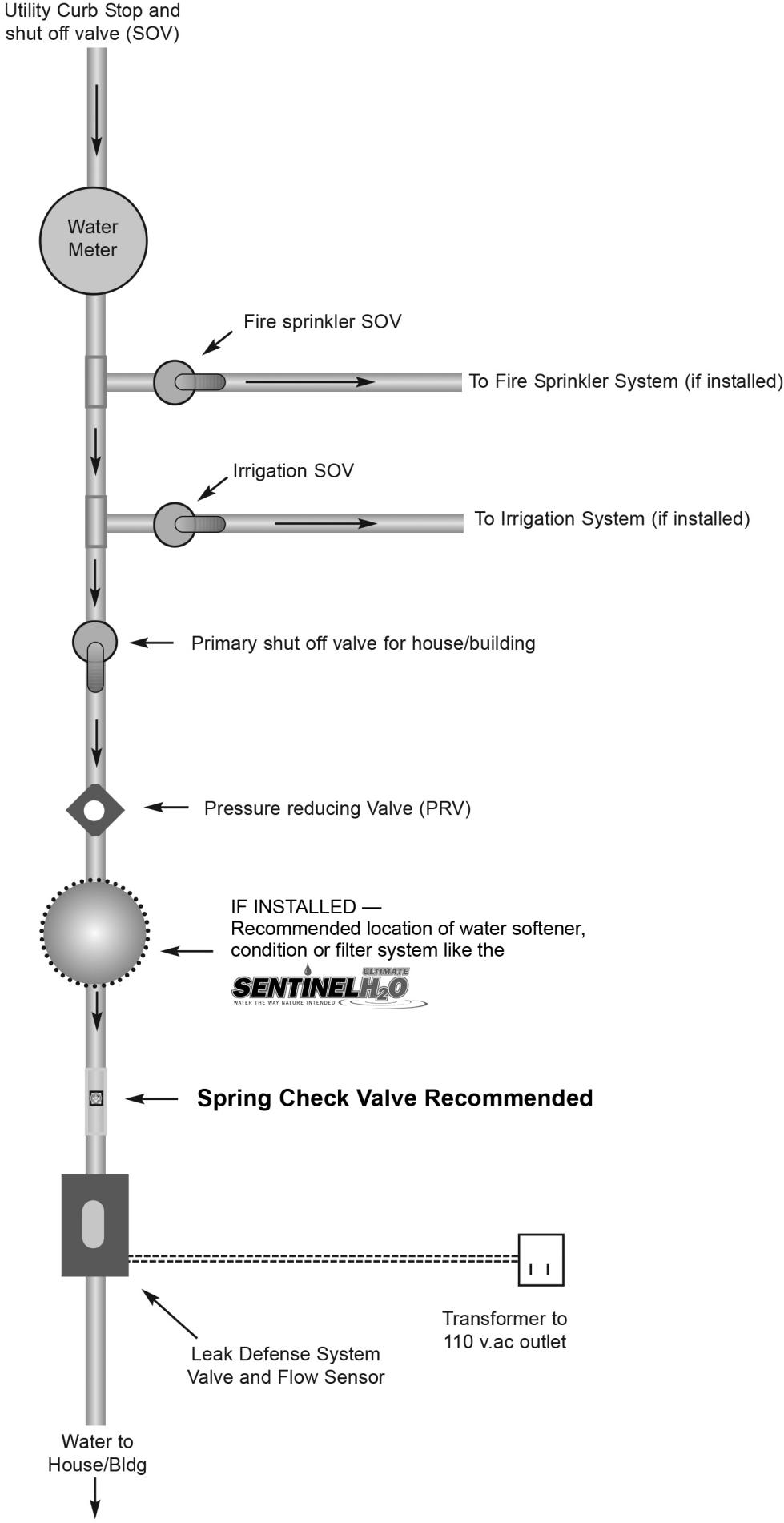
Determine wireless control panel location

- a. The control panel should be located inside near the most frequently used door of the home or in an easily accessible area.
- b. Once a location is chosen, make sure there is an outlet within 6' to provide power to the wireless panel.
- c. The wireless control panel should be located no farther than 100 feet from the Leak Defense System valve.
- d. An optional power supply is available upon request. The optional power supply allows the contractor to conceal the low voltage wire behind drywall. The standard length is 10' but additional wire may be requested.

Note: Please install control panel at least 8 inches (20 centimeters) from a common use area, per FCC/IC regulations.

Figure 1

General Piping Diagram



STEP 6:

Cut a space in the existing pipe wide enough to accommodate the valve/flowbody

The Leak Defense System includes a lead-free brass valve connected to a stainless steel flowbody. This valve/flowbody assembly is designed to be installed as one unit and should never be dis-assembled.

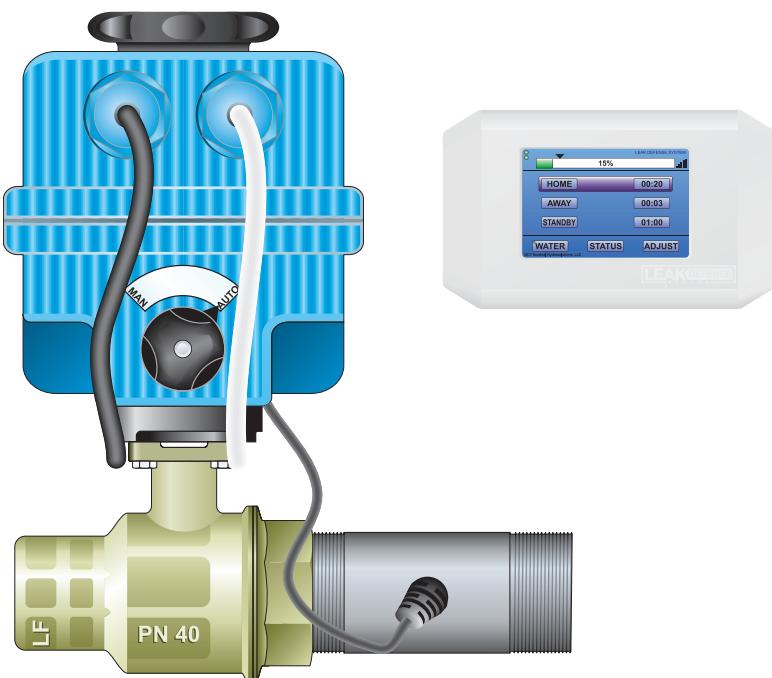
The Leak Defense System requires a length of pipe be removed to accommodate the valve/flowbody assembly and any connectors. The Leak Defense System valve/flowbody assembly can accept all common methods of pipe connections including unions, sweat adapters threaded pipe, or lead-free brass unions. Dielectric unions should only be used when connecting galvanized pipe to our system.

Critical: If some form of sweat adapter is used, it is imperative that heat from the torch does not reach the valve/flowbody as this may cause permanent damage to the Leak Defense System unit.

STEP 7:

Install Leak Defense System valve/flowbody

- a. Install using standard unions, sweat adapters or threaded pipe.
- b. Do not install in prolonged direct sunlight. This causes water in the valve to heat and the probes will interpret this as water flow.
- c. Make sure the valve has been installed with the water flowing in the correct direction according to the arrow on the unit.
- d. Restore water supply.
- e. Check for leaks at the valve/flowbody and probe.



Important: Bleed air slowly from the piping system to prevent damage to the Leak Defense System or to any other plumbing fixtures when water flow is restored.

Manual vs. Automatic Valve Position:

Systems 1.5" or smaller have a manual override on the front of the blue actuator. Normal operation requires the dial be positioned in the "AUTO" mode. "MAN" is only to be used when system needs to be overridden manually to open/close the valve.

Systems 2" or larger, press and hold black knob on top of blue actuator and turn to desired position.

Valve should be unplugged from power prior to attempting to open/close the valve manually.

STEP 8:

Connecting to power

- a. Connect the plugs that will go to transformer.
- b. Extend the wire that will go to transformer.
- c. Make sure wires are connected to the transformer AC and AC.

STEP 9:

Mounting the wireless control panel directly on a wall

- a. Use a pencil to mark the location of the mounting holes in the housing on the wall.
- b. Using #6 drywall anchors and screws, place 2 screws 2-1/2" apart, then slip panel unto screws.

STEP 10:

Last step is to provide power to the system

- a. Plug the transformer into the outlet that was located in Step 4. Actuator should fully close and fully reopen.
- b. Plug in the transformer to the wireless control panel.

Optional Power Supply:

Should you wish to hide the power supply wire feeding the control panel, an electrician can run the low voltage wire behind the drywall and connect it to screw terminals on the back of the control panel circuit board and the optional power supply with screw terminals.

The Wireless Control Panel



The wireless control panel will be used to setup and control your Leak Defense System.

From here you will be able to perform certain tasks like placing your Leak Defense in Home/Away mode or Standby mode. You will also be able to adjust the Time to Alarm (continuous time water can flow) in the Home and Away mode and the length of time you want the Leak Defense to remain in Standby. The trip rates for Home and Away mode are also set here. The main screen will also allow you to Turn Water Off, check the status and adjust the Leak Defense System.

Please keep in mind that it takes a few seconds for the wireless panel to communicate with the Leak Defense System valve.



Here is how it works:

STEP 11:

Confirm control panel water shut-off feature

DESIRED ACTION	SCREEN DISPLAY
Turn water OFF	Main Screen Tap the WATER button Tap TURN WATER OFF Tap the MAIN button GREEN dot next to water button will turn YELLOW then RED
Turn water ON	Main Screen Tap the WATER button Tap TURN WATER ON Tap the MAIN button RED dot next to water button will turn YELLOW then GREEN



STEP 12:

Calibrate the system

DESIRED ACTION	SCREEN DISPLAY
Calibrating the Leak Defense System	Main Screen Follow the instructions to turn water off in step 11. Tap the ADJUST button. Next tap the CALIBRATE button. Now press the SET NO FLOW button. Return to the main screen by tapping the MAIN button.
	Next follow the instructions to TURN WATER ON listed on STEP 11. Once you are back at the main screen and there is a GREEN dot next to WATER, press the ADJUST button. Turn on a nearby faucet and tap CALIBRATE . You will see the bar graph fill up. Note the value next to Flow mW=.
	Tap SET HI FLOW then tap MAIN button.
	Turn off faucet, observe the bar graph, water % should come down to 0% after several seconds. If it does not, you may have water running or a leak.



STEP 13:

Verify and set automatic shut-off features

DESIRED ACTION	SCREEN DISPLAY
Setting Time to Alarm - HOME mode	<p>Main Screen</p> <p>Tap the NUMBER BUTTON next to HOME.</p> <p>Enter the hours & minutes HH:MM.</p> <p>Tap PURPLE box to select the programmed time.</p> <p>(May be set from 1 minute to 4 hours based on customer's preference. Example: 30 minutes = 00:30)</p>
Setting Trip Level % HOME mode	<p>Main Screen</p> <p>HOME mode is highlighted</p> <p>Tap the bar graph.</p> <p>Enter trip level number between 1 and 100.</p> <p>Tap PURPLE box to select trip level setting (Typical setting is 10%)</p>
Setting Time to ALARM-AWAY mode	<p>Main Screen</p> <p>Tap the NUMBER BUTTON next to AWAY.</p> <p>Enter the hours & minutes HH:MM.</p> <p>Tap GREEN box to select the programmed time.</p> <p>(May be set from 1 minute to 4 hours based on customer's preference. Example: 30 minutes = 00:30)</p>
Setting Trip Level % AWAY mode	<p>Main Screen</p> <p>AWAY mode is highlighted</p> <p>Tap the bar graph.</p> <p>Enter trip level number between 1 and 100.</p> <p>Tap GREEN box to select trip level setting (Typical setting is 5 - 7%)</p>



STEP 14:

Other features

DESIRED ACTION	SCREEN DISPLAY
Setting the STANDBY mode	Main Screen
ATTENTION: Putting the leak defense system in standby means no water flowing into the home is monitored. A leak will go undetected in standby mode.	<p>Tap the NUMBER BUTTON next to STANDBY.</p> <p>Enter the hours & minutes HH:MM.</p> <p>Tap YELLOW box to select the programmed time. (May be set up to 29 hours)</p> <p>Tap STANDBY.</p>
Powering off the Leak Defense System	<p>Main Screen</p> <p>Tap the ADJUST button.</p> <p>Tap the SHUTDOWN button.</p> <p>(SYSTEM SHUTDOWN screen will appear with a warning regarding no protection and a suggestion to use STANDBY. If you want to proceed, tap SHUTDOWN NOW button).</p> <p>Panel will go dark, not monitor flow until you tap the screen again. Once you tap the screen, the LDS will be in normal mode and protecting your home.</p>

Selecting the mode you want the Leak Defense System to be in.

Simply tap **HOME**, **AWAY** or **STANDBY**. OTHER BUTTONS IN THE ADJUSTMENTS and SETTING SCREEN

The **FACTORY** button is used at the factory to assign an ID to the Leak Defense. Homeowner or installer should not change this value.

The **SCREEN** button is used by the factory to adjust the touch screen position parameter and should not be selected by homeowner or installer.

The **BK LIGHT** is used by the factory to set the brightness of the screen and how long it stays on.

STEP 15:

API-Alarm Panel Interface

POLD+ if you were to wire up a POLD sensor to the API (and it is polarized) the Sensor would have its black wire going to GND and its red wire going to POLD+. When the POLD+ goes to GND level, it trips.

To reset the alarm: First make sure that the sensor is completely dry. Then press and hold the TEST button on the API for 3 seconds. The LED will go dark until the button is released and will stay lit until the alarm condition is finally cleared at the control panel.

The opto isolators used for HOME/AWAY and STANDBY have non-committed inputs for maximum flexibility.

The input voltage is not to exceed 20 volts.

The IN+ would need to go to the positive input potential through a switch or wire.

The IN- would need to go to the negative or GND potential through a switch or wire.

Each opto-isolator has its own IN+ and IN- and they can be wired for high going signals, or GND (low) going signals.

The +REF and -REF signals are used as the voltage references for the optos. +REF usually reads 12VDC, while -REF is GND.

If (for example) you want the STANDBY to activate when its signal is grounded, then you would wire up the IN+ of STANDBY to the +REF and the IN- goes through a switch or relay to GND. If connecting to an alarm panel, make sure that the GND's are the same potential by connecting its GND to the API GND or -REF pins.

If (for example) you wanted to hook up an Alarm Panel that goes to 12 volts when in AWAY mode. Then wire the Alarm Panel GND and HOME/AWAY IN- to the API GND or -REF and wire the HOME/AWAY IN+ to the 12 volt AWAY trigger signal. (HOME mode is when the AWAY mode is not activated.)

Here are the valid MODE SEL combinations:

0 - H/A DIS	STBY DIS	POLD DIS
1 - H/A ENA	STBY DIS	POLD DIS
2 - H/A DIS	STBY ENA	POLD DIS
3 - H/A ENA	STBY ENA	POLD DIS
4 - H/A DIS	STBY DIS	POLD ENA
5 - H/A ENA	STBY DIS	POLD ENA
6 - H/A DIS	STBY ENA	POLD ENA
7 - H/A ENA	STBY ENA	POLD ENA
8 - F	is presently unused	



STEP 15:

API-Alarm Panel Interface (continued)

These settings will selectively create events that the API can generate and transmit to the control panel. DIS means that function is disabled and the system will ignore any activity on those input lines. ENA means that function will transmit and the panel will respond to input activity on those lines.

The LED will flash briefly during data transmissions and glow solid when the ALARM is active.

The RELAYs both operate together (as of rev 1.00) when an ALARM condition is transmitted. When the panel releases the ALARM, the RELAYs will deactivate.

ATTENTION: Putting the leak defense system in standby means no water flowing into the home is monitored. A leak will go undetected in standby mode.

Connecting an Intermatic Spring Wound Timer to the LDS-3-API

Connect one wire from timer to IN- (below standby)

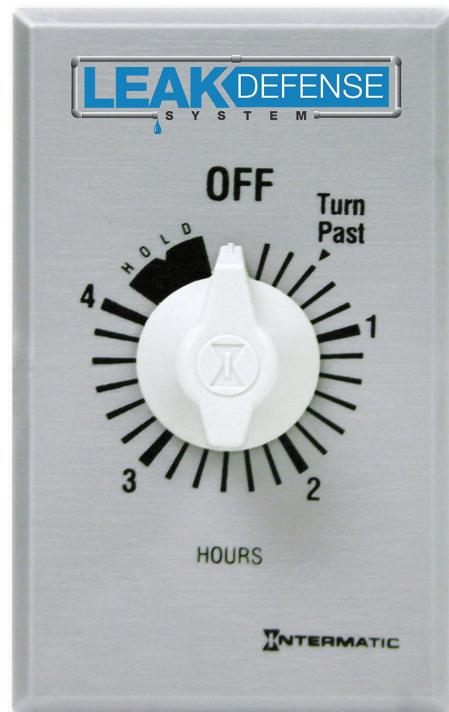
Connect the other wire to -REF.

Place a jumper from IN+ (below standby) to +REF

Yellow dial on API should face 2.

When timer is activated you should see the Leak Defense System control panel switch from Home or Away to Standby. When the timer runs out, the Leak Defense System should go back to Home or Away.

ATTENTION: Putting the leak defense system in standby means no water flowing into the home is monitored. A leak will go undetected in standby mode.



Wiring Instructions for a PAM Relay

Connect blue wire from PAM1 to IN- (below standby) on API

Connect orange wire from PAM1 to -REF on API

Place a jumper from IN+ (below standby) to +REF on API

Connect red wire from PAM1 to MV/P (master valve/pump) terminal on irrigation controller.

Connect white wire from PAM1 to COM on irrigation controller

Yellow dial on API should face 2.

When irrigation starts you should see the Leak Defense control panel switch from Home or Away to Standby. When irrigation stops, the Leak Defense should go back to Home or Away.

You may be able to start irrigation manually to test.



Wiring Instructions for a Hardwired Hot Water Recirculation Pump

There are two options for connecting a hardwired Recirculation Pump to the Leak Defense System Recirculation Pump Switch.

1. Disconnect the wires that feed the pump from the power source. Attach a plug on the wires coming from the pump and plug them into the 110VAC outlet built into Leak Defense Recirculation Pump Switch.
2. Remove the 110VAC outlet from the Leak Defense Recirculation Pump Switch. Attach the wires that feed the pump to the black, white and green wires that are connected to the 110VAC outlet. You may have to install a cord grip on the Leak Defense Recirculation Pump Switch box to get the wires inside the box. Be careful not to damage the circuit board inside the box. You can then place a solid cover over the box where the outlet was.



NOTE: The plug on the Leak Defense Recirculation Pump Switch will have to be plugged into a 110VAC outlet or hardwired to a power source.

On the API, place a jumper between +REF and the next terminal to the right which is NO. Then the red wire from the re-circulation pump switch goes to next terminal to the right which is COM. Black wire goes to GND or -REF.



Connecting a POLD to Your LDS-3 System

If you choose to connect our wireless POLDs (Point Of Leak Detectors) they will easily interface with your LDS-3 system to provide monitoring and control functions.

These small devices provide a way to pinpoint certain areas such as in laundry rooms, toilets and near other water using appliances to provide an immediate alarm should a leak occur.

The Leak Defense Point of Leak Detector (POLD)

PRODUCT FEATURES AND SPECIFICATIONS

- Black box dimensions are 3.9" x 2.2" x 0.94"
- Adjustable 4.5" antenna
- Durable water-resistant plastic enclosure designed to be installed in a dry location
- Rear battery compartment
- Powered by two AAA batteries



TESTING THE DEVICE

- Insert AAA batteries into enclosure
- Test the sensor by touching the two metal brads with water
- The sensor should quietly beep
- Clear the alarm by pressing the reset button inside the back panel for about 5 seconds
- Replace the battery compartment cover and place sensor in desired location
- Following an alarm notification, after resetting the sensor, determine that there isn't an active leak. Once you've confirmed that there is no leak, return to the control panel. Press RESET.

NOTE: When the POLD has alarmed, it cannot be reset remotely from the app. The reset button on the sensor must be held for 5 seconds and released before the alarm can be cancelled from the control panel and the app.

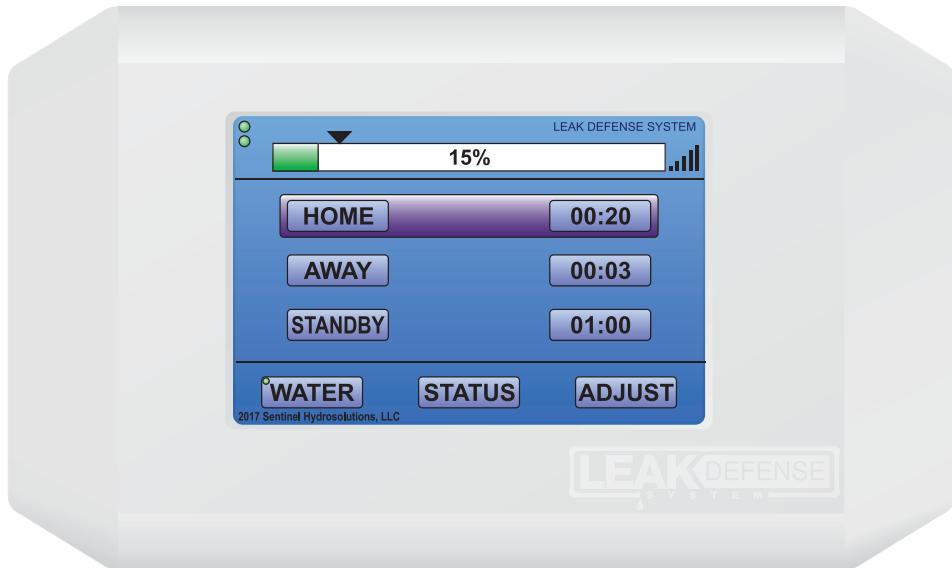
LDS-3 Connecting POL and SS Relays to API

1. Terminals 1 and 2 of each solid state relay break each hot leg going to well pump.
2. On the API place a jumper between +REF and NO on the API relay.
3. Wire the solid state relay input terminals in series as follows. Take COM of the same API relay and run it to terminal 3 of the first solid state relay. Then take 4 of that same relay and connect it to 3 of the second solid state relay. Then take 4 of the second solid state relay and run it back to -REF on the API.
4. The POLD and GND terminals of the API get connected to POL sensor. This only applies to wired POL sensor and is not used with wireless POLD.
5. Yellow dial in center of API circuit board needs to be facing 4 to enable the POL sensor.
6. To test the POL sensor take a moist paper towel and touch the 2 metal screws. The Leak Defense System will go into alarm and the solid state relays should turn off the well pump. Well pump must be running as the solid state relays require a load to open. Push the reset button on API and then press reset on Leak Defense Control panel.

For technical support please 866.410.1134.



Owner's Manual



Overview

HOME Button: Places the Leak Defense System in HOME mode.

AWAY Button: Places the Leak Defense System in AWAY mode.

STANDBY Button: Allows the user to put the system into STANDBY for up to 24 hours.

WARNING putting the Leak Defense System into STANDBY may allow a leak to go undetected as it is ignoring all water flowing.

WATER Button: Tapping the WATER button allows you to turn the water off.

STATUS Button: Tapping the STATUS button allows you to see system information.

ADJUST Button: Tapping the ADJUST button takes you to the ADJUSTMENT and SETTINGS Screen.

NUMBER Button: Tapping the NUMBER button next to HOME or AWAY allows you to set the amount of time water can flow before the Leak Defense alarms. Tapping the number button next to STANDBY allows you to set the amount of time you want the system in STANDBY.

BAR GRAPH Button: While either HOME or AWAY is selected, tapping the bargraph allows you to set the TRIP RATE for each mode.

WHEN LDS ALARMS: When the LDS alarms you will see a red screen indicating the reason why the water has been shut off.



Using the Control Panel

The control panel screen will normally be dim. Touch the screen anywhere to make it light up. After a period of inactivity the panel will return to dim state. At the main screen you will see a bar graph that will indicate how much water is flowing.

• HOME and AWAY

These buttons allow you to switch your Leak Defense System from **HOME** mode to **AWAY** mode when you are leaving the house. The highlighted box indicates what mode you are currently in.

When you are leaving the house, touch the screen and the Main Screen should be displayed.

If the **HOME** button is highlighted, press the **AWAY** button.

• Turn off water

The **WATER** button will allow you to shut the water off to your home. Press this button and tap **TURN WATER OFF**. Tap **MAIN** and you should see the green dot next to the **WATER** button turn red. To turn water back on, simply tap **WATER** again.

• Program the system

Allows the user to customize the system settings. The TIME TO ALARM and TRIP RATE functions will need to be programmed in both the HOME and AWAY mode when the Leak Defense System is first activated but these settings may be changed or adjusted at any time.

With the **HOME** button highlighted you can program the TIME TO ALARM and TRIP RATE functions. These will allow you to program the time water can continuously flow when you are home and the TRIP RATE allows you to set the sensitivity you desire.

With the **AWAY** button highlighted you will be able to set the TIME TO ALARM and TRIP RATE. This will allow you to program the time water can continuously flow while you are away. You can also program the TRIP RATE.

• Partial Flow Feature

In the Home Mode all Leak Defense Systems have a built in warning mechanism that will let you know that you have exceeded the Time to Alarm Setting and water is about to be turned off.

When you reach the Home Time to Alarm, the system turns the water off for 30 seconds and then re-opens the valve to check to see if water is still flowing. If the water has stopped flowing it resets the alarm clock. If water is still flowing it alarms and shuts off the water.

So, if you are running water and notice that the water stops flowing you will need to turn off the running water for about 60 sec. This will give the system time to turn the water back on and to confirm there is no water flow, and that there is not a leak and will return to normal, resetting the time to alarm clock. If the system stills sees flow it will assume it is a leak and will turn off water completely. At any time you can go to the control panel and push the button indicating that the flow is normal and reset the system.

This warning mechanism is not available in the AWAY Mode as the system assumes no one is home and shuts the water off immediately once the time to alarm is reached. This feature is only available in the Leak Defense Systems.

• The alarm started sounding and I am home. What should I do?

If the water flow is due to a routine activity that normally occurs within your household:

You may want to adjust the Leak Defense System settings. If so, you will first select "RESET" and then either:

- 1) Increase the TIME TO ALARM setting or
- 2) Increase the TRIP RATE setting or
- 3) Tap WATER to turn water back on

If you are filling your swimming pool, watering your lawn for an extended time, or running water for some other reason, do the following after selecting "RESET":

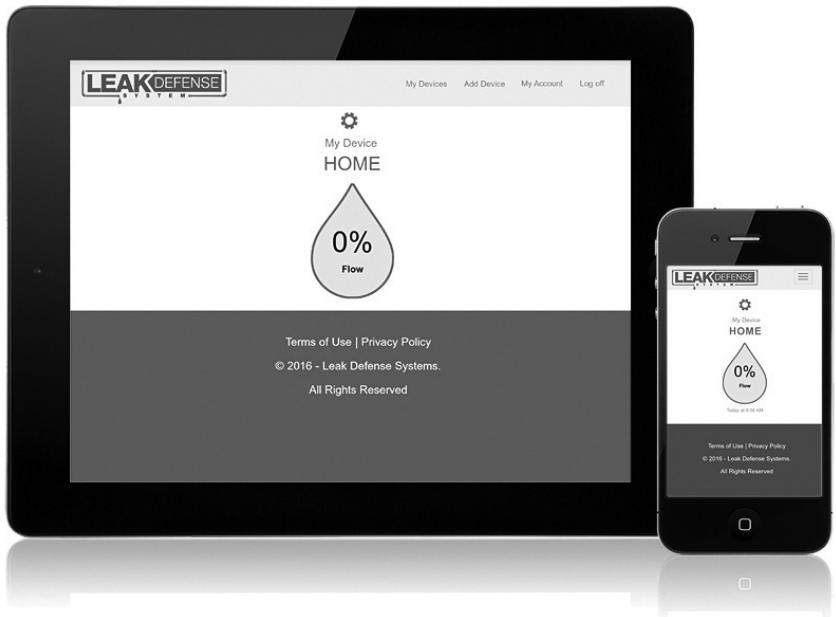
Tap the **NUMBER** box next to STANDBY and select the amount of time desired for the system to remain in STANDBY, then tap the **YELLOW** box, press **STANDBY**.

If there is nothing unexpected happening:

If you don't believe your water settings are set too conservatively, you will want to check for a leak.

Set Up Wifi and Web-Based App

Compatible with most 2.4 ghz networks.



Wifi

First connect to your WIFI access point

Tap ADJUST on Leak Defense Control Panel

Tap SET WIFI

Tap STANDARD SETUP and select your access point

Tap NEXT and enter your password

Tap NEXT and your panel should restart

When the panel restarts you will see some yellow text as you are connecting to your network.

You should see it connect to your home WiFi and get an IP address other than 0.0.0.0.

You should then see it attempting to find the Sentinel website and then it should indicate that it found it.

*****If the incorrect password or access point is entered into the control panel, the control panel will continue rebooting until you touch the control panel's splash screen which comes up right after the yellow text. (Splash screen is at system restart that displays the Droplet with green, white and blue gradient bars.) At this point, you should go through the steps again and select the correct router and password.

Web-based access

On your phone or laptop go to <http://catchaleak.com>

Click on REGISTER AS A NEW USER

Fill out the form including the DEVICE ID that was supplied with your system.

Click on REGISTER. You should get a notice thanking you for registering.

You will immediately receive an email with a link and/or a text to which you will have to reply with a confirmation number. (Check your junk email)

Close www.catchaleak.com and reopen.

Log in with your email address and password you selected.

You should see a screen with a water drop.

Touch the SETTING button above the water drop.

Here you can enter a name for your device.

You can also switch from HOME to AWAY or STANDBY

You can also adjust the TRIP RATE and the TIME water can continuously run without the system alarming.

Fine-tuning to Your Lifestyle

The Leak Defense System is designed to minimize the chance of a leak in your home from becoming a catastrophic flood by catching and stopping a leak as early as possible.

The System has two basic modes, the HOME mode and the AWAY mode. Each of these modes has two variable settings, the TRIP RATE and the TIME TO ALARM. Understanding these settings will enable you to make the correct decisions to maximize the protection of your home against water damage.

HOME mode

In the HOME mode the default setting for the Time to Alarm is set to 5 minutes and the Flow to Alarm (Trip Rate) is set to 10%. This means that water must flow continuously for 5 minutes above a trip rate of 10% for the system to alert. At any point when the TRIP RATE drops below 10% the clock resets.

These settings can and should be adjusted to conform to your daily water use and level of protection you desire. For instance, if you normally take a 15 minute shower you should set the time to alarm to 20 minutes or more. If you have an active home you may need to set your time to alarm to 45 minutes or longer. A key point to remember is that dishwashers and washing machines may run for an hour or more, but they only pull water for a few minutes.

One way to determine exactly where to set the flow is to partially open a faucet and then look at the bar graph to see what percentage that flow is. Continue to close the faucet and compare the flow rate at the faucet with the flow rate displayed on the bar graph. This will help you to decide where you want to set the TRIP RATE. If you are concerned with very small leaks you should set the TRIP RATE as low as possible (2 or 3%) without the system alarming.

The first few weeks after installation the system may alarm. Be aware that these are not "false alarms." If the system goes off water is/was flowing somewhere in your home. For the first time you now have the ability to know when water is flowing in your home with this system. Adjusting your Time to Alarm and TRIP RATE will allow you to optimally protect your home and not have nuisance alarms, the combination most people are looking for.

AWAY mode

In the AWAY mode, the default setting is 5 minutes for the Time to Alarm and the TRIP RATE is 10%. Here again, if you are concerned with very small leaks you should adjust the TRIP RATE to as low as possible without the system alarming. Most people end up with a TRIP RATE of 7% or less and 3-5 minutes Time to Alarm in the AWAY mode.

If an accessory like a flow switch, relay or timer has been added to put the Leak Defense System into STANDBY mode for any reason, during that time the house is unprotected. When in the STANDBY mode, the Leak Defense System does not monitor water flowing and may allow a leak to go undetected. It is always preferred to separate pool and irrigation feeds from the house supply line. Please make sure all users and owners of the Leak Defense System are made aware of this. Contact our office if you have any questions.

Need Help?

Unsure how to change the settings to your preferences? No problem! Just give us a call and we'll happily walk you through it over the phone. **Feel free to call us from 9am - 5pm Pacific Time at (866) 410-1134, ext. 1**

We hope these tips are helpful. Please complete your Warranty Card included with your system or complete the on-line form at www.leakdefensesystem.com/warranty if you prefer.

LEAK DEFENSE SYSTEM LIMITED WARRANTY

Warranty Period:

The manufacturer warrants its products that are sold and installed in the United States to be free of defects in materials and workmanship under normal use and service for a period of two (2) years from the date of purchase by the end user.

Warranty Coverage:

The manufacturer's obligations shall be limited within the warranty period, at its option, to repair or replace the product or any part thereof. In order for the warranty to apply, the Leak Defense System must be installed by a licensed plumber, licensed General Contractor or approved installer. Any recommendation or referral of or to a local installer, licensed contractor or service provider is provided as an accommodation to the end user of the product and shall not infer nor create liability or agency relationship flowing back to the manufacturer. The manufacturer shall not be responsible for dismantling and/or reinstallation charges.

**FOR WARRANTY CLAIMS, CONTACT SENTINEL HYDROSOLUTIONS AT
WWW.SENTINELHYDROSOLUTIONS.COM OR CALL 1.866.410.1134**

Items Not Covered:

Neither the manufacturer nor the seller of the Leak Defense System shall be liable for any damage or loss whatsoever whether directly, indirectly, consequentially or otherwise, caused by the malfunction of the product or a problem arising from the installation or calibration of the product.

The product as designed will not prevent leaks; but rather it identifies possible leaks in the monitored water distribution system caused by a significant variance in water flow over time and is designed to stop the supply of water to the identifiable plumbing providing water to the structure if the flow of water exceeds the preset parameters. The manufacturer shall not be responsible for damages including but not limited to, damages for loss of profits, goodwill use or other intangible losses (even if the manufacturer has been advised of the possibility of such damages) resulting from the failure of the Leak Defense System or associated equipment.

The manufacturer does not represent that its product may not be compromised and/or circumvented, or that the product will prevent any flood or damage to property resulting from a water leak or otherwise that the product will, in all cases, provide adequate warning or protection. Particularly in structures that the manufacturer or the installer(s) are unable to clearly identify the entirety of the water distribution system.

User or owner EXPRESSLY UNDERSTANDS AND AGREES that neither the seller nor the manufacturer has control on the final use of this product, its good working condition, proper installation and its reasonable maintenance and that consequently, a properly installed and maintained system may only reduce the risk of an event involving water damage in specific circumstances:

- Damage or operational deficiencies due to water quality issues such as sediment or scale accumulation.
- Damaged caused by plumbing that is not monitored by the system.
- Replacement of house fuses or resetting of circuit breakers.
- Damage to the product caused by accident, fire, or acts of God.
- Damage caused after delivery.

The above is in lieu of all others warranties; guarantees, statements expressed or implied and the items listed are not intended to be all-inclusive but rather representative of items not covered. The warranty is limited to the express warranty set forth herein. No warranty whether express or implied shall apply beyond the two (2) year limited warranty period outlined above. Some states do not allow limitations on whether an implied warranty applies or how long an implied warranty lasts, therefore the above limitation may not apply to you. To know what your legal remedies or rights might be, consult your local state consumer affairs office or your state's Attorney General.



1223 Pacific Oaks Place

Suite 104

Escondido, CA 92029

tel: 760.884.8300

fax: 760.884.8310

www.sentinelhydrosolutions.com

www.leakdefensesystem.com



PRODUCT LINE CERTIFICATIONS

This device complies with part 15 of the FCC Rules.

Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.



FCC ID: 2AMDU-LDS IC: 23980-LDS UL: E488392

INSTALLER:

Please leave this guide with the homeowner when installation is complete.